GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:1943
ANSWERED ON:09.03.2016
R&D in Earth Sciences
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government proposes to increase the allocation of fund for Research and Development (R&D) in earth sciences and if so, the details thereof;

(b) the percentage of GDP incurred on R&D initiatives in earth sciences during the last three years;

(c) the other plans of the Government to attract students for research in earth sciences and give fruitful results; and

(d) whether scientists are given world class facilities, equipments, resources, packages to carry on their research, etc. and if so, the details thereof?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) Yes, Madam. There has been a gradual increase in the allocation of funds for Research and development in the earth sciences. The year-wise total allocation including plan and non-plan for the last 3 years are as follows:

(Rs. in crores)

Year	Budget Estimate (BE)	Revised Estimate(RE)
2012-13	1678.39	1198.67
2013-14	1693.60	1311.12
2014-15	1699.00	1333.60

(b) The percentage of expenditure incurred with respect to GDP for R&D initiatives of earth sciences during the 3 years are 0.0096, 0.013 and 0.0126 for 2012-13, 2013-14 and 2014-15, respectively.

(c) Towards attracting the students for conducting research in the field of earth sciences, the Ministry of Earth Sciences had established a Center for Advanced Training in 2011 at Indian Institute of Tropical Management, Pune, as a world class job linked programme with an objective to create a pool of trained scientists in the field of earth sciences. So far, three batches of trainees have been inducted in various centres of the Ministry. Besides, an International Training Centre for Operational Oceanography has been setup in Hyderabad for development of skills to conduct front ranking research in the field of Ocean Science. The Ministry has set up Earth System Science Cells in various universities for conducting research in the field of earth sciences. A set of four Project Appraisal and Monitoring Committees (PAMCs) and a Technology Research Board have been constituted for appraisal, review and monitoring of the various projects for consideration for funding. An Apex committee chaired by the Secretary has also been constituted to consider specific proposals recommended by these committees. As of now, 27 projects are funded under the theme of Atmospheric Science including Climate Change; 33 projects under Geosciences; 10 projects under Hydrology & Cryosphere etc. All these initiatives are expected to enhance the skill of the operational weather, climate, ocean state and multi-hazard services incrementally for accruing the societal benefits in terms of minimizing the loss of life and property. The details are given at annexure-1.

(d) Yes, Madam. Scientists are being given world class facilities, equipment and resources to carry out the research in earth sciences. The major initiative for creation of facilities viz., (i) geochronology laboratory to support contemporary cutting-edge research in isotope geochemistry and geochronology pertaining to earth, atmospheric, oceanic and planetary sciences at international level of a facility for Geochronology at Inter-University Accelerator Centre (IUAC), New Delhi (ii) Scientific deep drilling in Koyna Intra-plate Seismic Zone of Maharashtra is aimed at setting up of borehole observatories at depth for directly measuring the in-situ physical properties of the rocks, pore-fluid pressure, hydrological parameters, temperature and other parameters of an intra-plate, active fault zone in the near field of earthquakes - before, during and after their occurrence, leading to a better understanding of the mechanics of faulting, physics of reservoir triggered earthquakes and preparing a predictive model (iii) provide logistic and scientific support to conduct front ranking research in the polar regions ie., Antarctic and Arctic (iv) provide state of the art computing facility, real-time data of various atmospheric and oceanographic parameters, high resolution models.